

Figures for Stray Creek Roads and Water Quality

For WEPP input and output three key things control the model's predicted changes in sedimentation for the roads. The first is slope steepness, the second is road maintenance, and the final is the proximity to riparian areas.

SideSlopes: Using GIS, we derived road sideslope steepness from the DEM/LiDAR data, the steeper the sideslopes the more likely there will be erosion and the potential for sediment deliver to stream. The red tones indicate slopes with higher potential for delivery.

Road Maintenance: Nearly all the roads in the Project Area for Stray Creek, including the Yakus Creek road will receive maintenance at the recondition level. In WEPP:Road, both traffic level and road design are used as a surrogates for Road Maintenance impacts. WEPP road project runs were run with higher traffic levels to account for both maintenance and increased traffic during project use and the road design for System Roads that were Level 1 or 2 (a Forest Service Rating that indicates standard of the road and road design, Level 1 or 2 roads are native surfaced roads, often closed part of the year or year round and are generally outslowed and maintained only for high clearance vehicles, higher levels of roads generally indicated additional road surfacing, a maintained ditch, and are maintained for passenger cars).

Proximity to Riparian Areas: Roads within 150 feet of riparian areas were run with smaller riparian buffers and where the roads crossed streams in those areas, the buffer was further reduced to between 10-30 feet depending on local knowledge of the road crossings.

Stray Creek Road SideSlopes

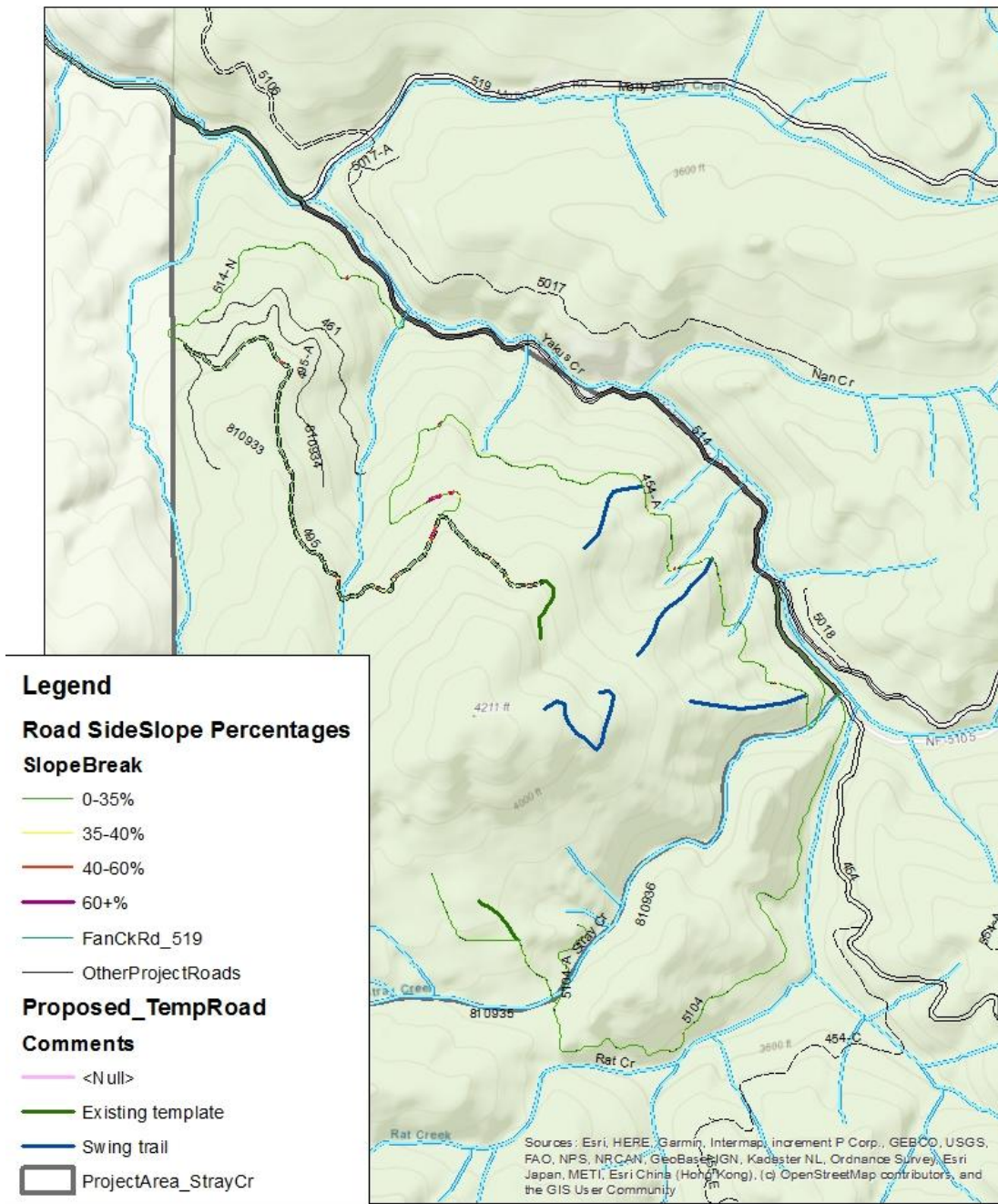


Figure 1. Road SideSlopes, steep sideslopes are red and pink. Slopes based on DEMs.

Legend

- Proposed_RoadMaintenance
- <Null>
- CV - CONVERTED
- DE - DECOMMISSIONED
- EX - EXISTING
- PL - PLANNED
- OtherProjectRoads
- StrayCreek_riparianbufferUnion
- ProjectArea_StrayCr

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Figure 2. Stray Creek Proposed Road Maintenance and Proximity of Road to Riparian Areas. The Yakus Creek (FS#514) road was also run in WEPP and the length of the road is considered within a riparian area. Where roads cross streams, the riparian buffer was further reduced.